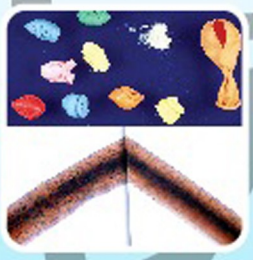
2010 Annual Report

Indianapolis-Marion County Forensic Services Agency

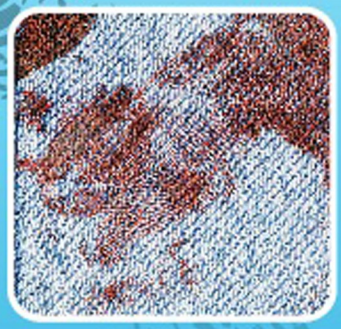
Biology
- DNA
- Serology

Documents
- Handwriting
- Counterfeits

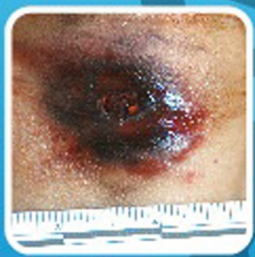


Chemistry
- Drugs
- Trace

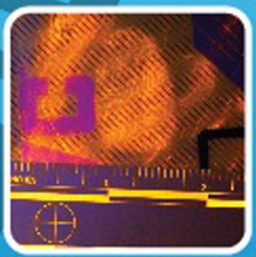
Crime Scene Unit



Firearms
- Tool Marks
- Shoe Impressions



Evidence Technicians
- Autopsy
- Digital Imaging



Latent Prints
- Print Identification
- Processing

(317)327-3670
40 S. Alabama St.
Indianapolis, IN 46204
www.indy.gov/eGov/County/FSA/Pages/home.aspx

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2010 Forensic Services Board

Paul Ciesielski
Chairman
Chief, Indianapolis Metropolitan Police Department

Frank Anderson
Marion County Sheriff

Billie Breaux
Marion County Auditor

Dr. Frank P. Lloyd, Jr.
Marion County Coroner

Joseph Bono
Mayoral Appointee
Adjunct Professor
IUPUI Forensic and Investigative Sciences Program

Dr. Sam Nunn
City-County Council Appointee
Professor, IUPUI School of Public and Environmental Affairs

We are grateful for the dedication and wisdom of our Forensic Services Board. In spite of their busy lives, filled with other responsibilities, they selflessly gave of their time to serve in 2010.

Indianapolis-Marion County Forensic Services Agency 2010 Annual Report

Michael Medler
Laboratory Director

The Mission Statement of the Indianapolis-Marion County Forensic Services Agency reads as follows:
The Indianapolis-Marion County Forensic Services Agency (IMCFSA) shall provide forensic services to the Marion County Community by supporting the needs of the Criminal Justice System. The forensic services provided shall be built on a foundation of quality, integrity, accountability and ethics. All I-MCFSA personnel shall strive to meet forensic needs of today and into the future in all their work endeavors.

During 2010 the IMCFSA completed 13,093 cases for the public safety agencies within Indianapolis/Marion County. But what does this really mean or what is the real value of the role of forensic science in the criminal investigation process? The individuals who work in a forensic laboratory are the "silent warriors" behind the scenes who accomplish everything collecting evidence at a crime scene to identifying a perpetrator's DNA. A better way to explain what we do is to give real life examples of how forensic science was used as a tool in solving crime in the narratives listed below:

- ***A young 15 year old female was abducted after she got off a school bus and was walking toward her home. She was sexually assaulted and the crime scene was processed by an IMCFSA Crime Scene Specialist. Latent fingerprints were recovered on the day of the incident and subsequently an IMCFSA Latent Fingerprint Examiner identified the latent fingerprints to a suspect who was then arrested by IMPD.***
- ***An Indianapolis woman's 1989 slaying is the one of several cold cases recently solved by the use of DNA Analysis.***
- ***A 15 year old Junior High School student was found bound, sexually assaulted, gagged and drowned in Fall Creek in April of 1985. In 2001, an IMCFSA DNA Analyst obtained a CODIS (Combined DNA Indexing System) hit on this cold case. A perpetrator was subsequently identified, arrested and convicted of these crimes and sentenced to 115 years in prison.***

These are a few of the many stories where Forensic Science and the work of the Indianapolis-Marion County Forensic Services Agency led to a successful end to an investigation. Oftentimes, the professionalism and knowledge of IMCFSA personnel is called upon to aid an investigation. The response of the personnel at the IMCFSA is as stated in the Mission Statement: "The forensic services provided shall be built on a foundation of quality, integrity, accountability and ethics." These qualities do not come without dedication and sacrifice to ensure that we provide forensic support as part of a "team" with others in the criminal justice system for the good of the Indianapolis/Marion County community.

Michael M. Medler
Laboratory Director

Forensic Service Built on a Foundation of Quality, Integrity, Accountability, and Ethics

Indianapolis-Marion County Forensic Services Agency 2010 Annual Report

Overview

The I-MCFSA (Crime Lab) began operations in 1985, providing services to all law enforcement agencies in Marion County. The Crime Lab provides scientific testing on items of evidence recovered in criminal cases by its own Crime Scene Specialists, Forensic Evidence Technicians working in the Marion County Morgue, and any other police investigator working a crime that occurred in Marion County, Indiana. Forensic analysis is conducted in the fields of Drug and Trace Chemistry, Latent Fingerprints, Serology & DNA Analysis, Firearms, Toolmark, Footwear & Tiretrack Comparisons, Forensic Documents, Photography, Videography and Digital Imaging. The laboratory provides expert testimony in these areas when requested.

Major Crime Scene Vehicle Purchased on a U.S. Department of Homeland Security Grant

Staffing

The I-MCFSA is authorized 68.6 full time equivalent employee positions. This number is equal to the 2009 staffing level however, three (3) open positions remained unfunded during 2010: two (2) DNA Analyst positions and one (1) Crime Scene Specialist position.

Caseload

Over 47,000 items of evidence were received and 12,892 cases were completed by the Crime Lab in 2010. Some of the larger areas included Drug Chemistry with over 17,000 items, the Crime Scene Unit with over 8,000 evidence items, and the Biology Unit with over 6,000 items analyzed during the year. Requests for analyses remained steady from 2009 levels in all sections of the lab. Grant monies for outsourcing helped with backlogs during the year in Serology and DNA.

The IMCFSA is still working toward a goal of an average six-week turnaround in each laboratory section. While work remains, most sections attained this goal during 2009, with the exception of Serology where the demand for services far outweighed resources.

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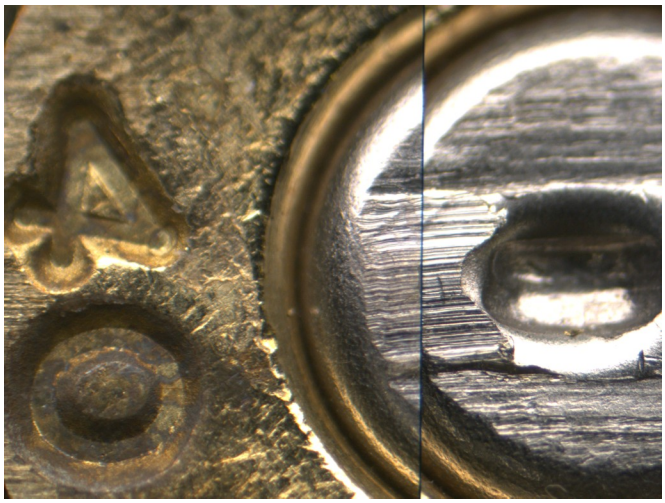
Identification - Glock Aperture Shear - Cartridge Case from the Crime Scene on the left and Test Fired Casing on the Right

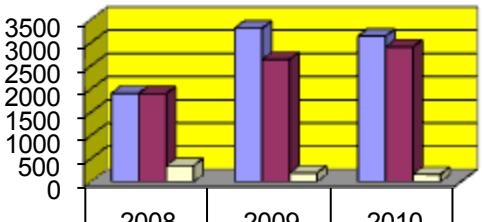


Criminalistics Unit Firearms Section

The Firearms/Toolmarks Section test-fires weapons, compares ammunition components to suspected weapons, compares bullets and cartridge cases from different crimes, compares toolmarks left at crime scenes with suspected tools, and, compares shoe and tire impressions from crime scenes with suspected shoes and tires. This section uses the Integrated Ballistics Information System (IBIS) – a tool which digitizes the unique markings left by firearms on ammunition components for upload to a regional database which can be run internationally – an investigative tool linking evidence from various crimes involving firearms. Sixty-three (63) "hits," or links between ammunition components and firearms or ammunition components in different cases were made during 2010, bringing the total "hits" in this laboratory to 349 since the installation of this technology.

The staff of the Firearms Section consists of five (5) Firearms Examiners, one of which supervises the section, and two (2) Firearms Technicians. The chart below depicts Firearms Section casework activity in recent years.

Firearms Examinations/NIBIN



	2008	2009	2010
Case Submissions	1907	3309	3138
Completed	1898	2637	2906
Backlog	347	191	162

IMCFSA Firearms Section

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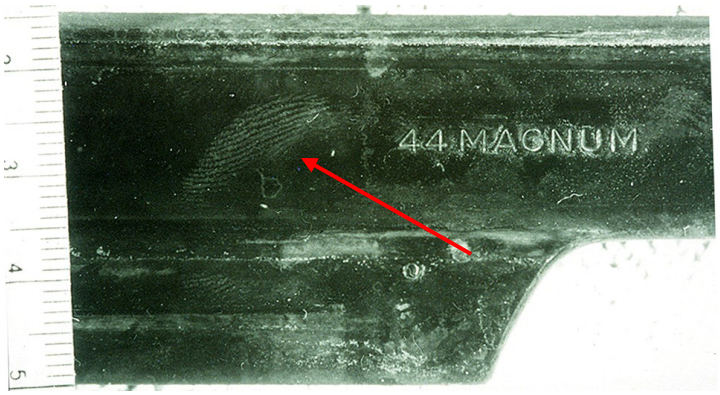
Latent Print Developed on a Handgun Slide with Superglue



Criminalistics Unit Latent Fingerprint Section

Latent prints are invisible replications of the details found in the friction ridge-covered skin on the fingers, palms, toes and soles of a person's feet. This detail is made visible with various processing techniques: dusting with powders, the application of chemicals, and specialized lighting techniques. Once the print is visible it must be preserved by the use of photography, the application of tape, or some other means so that it might be examined and compared.
The I-MCFSA employs four (4) Latent Print Technicians who process items using various techniques, depending upon the surfaces and composition of the evidence. They capture any ridge detail which becomes visible, generally through the use of digital photography or by making powdered ridge detail stable with adhesive tape. The lab's Crime Scene Specialists also employ the same latent print processing and preservation techniques when at crime scenes, or on evidence brought to the laboratory.

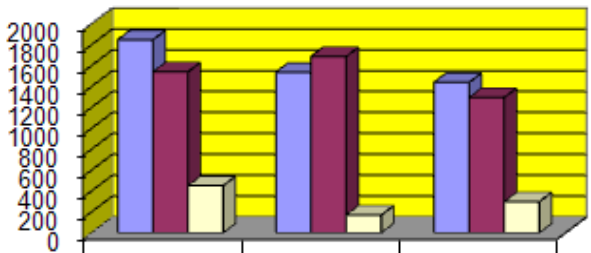
The preserved ridge detail is then transferred to a Latent Print Examiner whose job is to examine the detail and determine if it is identifiable, and if so, who deposited it at the scene or on the item of evidence. The I-MCFSA employs three (3) Latent Print Examiners.

Latent prints are compared to suspects named as a part of the investigation or run through the Automated Fingerprint Identification System (AFIS) if suspects are unknown. AFIS is a database which contains the digital replication of known prints of convicted felons and other people (i.e. criminal justice system employees) as determined by the jurisdiction who owns the system. AFIS makes a digital comparison between unknown latent prints and the known database prints and produces a list of individuals whose prints may match the unknown evidentiary prints. The Latent Print Examiner must still make a side-by-side comparison between the known and unknown prints in order to identify or exclude individuals as having left the latent print, regardless of the AFIS results.

AFIS is also used to store unidentified evidentiary latent prints and continually compares them against the known database as it expands. The system notifies an examiner regarding any potential "hit," or possible match between the unknown prints and known prints of people being added to the database.

A total of 330 subjects were identified on latent prints developed by the Crime Lab during the year, many of which resulted from serious crimes.

Latent Fingerprint Processing & Comparison



	2008	2009	2010
Case Submissions	1847	1536	1439
Completed	1541	1687	1295
Backlog	451	170	298

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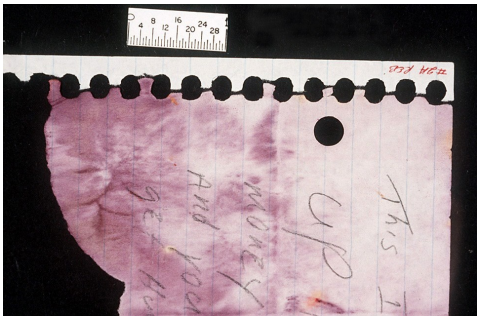
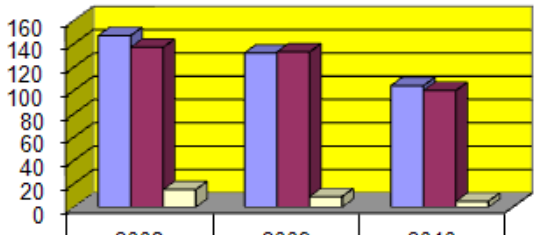
Criminalistics Unit Forensic Documents Section

The Forensic Documents Section is staffed with two (2) Forensic Document Examiners, one full-time examiner and the Deputy Director . The majority of the work is comprised of handwriting comparison – the identification of the writer of documents used in crimes (i.e. charge card receipts, robbery notes). This section also examines indented writing, inks, altered or counterfeit documents, photocopiers, typewriters and other machines or tools used to create documentary evidence.



Physical Match - Robbery Note to the Notebook from Which it was Torn

Forensic Document Examinations



	2008	2009	2010
Case Submissions	147	132	104
Completed	137	133	100
Backlog	15	9	5

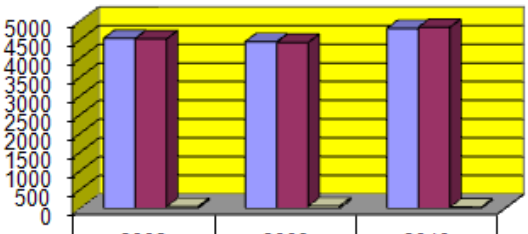
Chemistry Unit Drug Chemistry Section

The Drug Chemistry Section is staffed with five (5) full-time and one part time Drug Chemist (one of which supervises the Chemistry Unit) and the Quality Assurance Manager. This section tests suspected drugs to determine the presence and weight of any controlled substances. Marijuana, cocaine, methamphetamine and heroin are the most commonly identified controlled substances, however, various pills, steroids, and designer drugs are also identified. Multiple tests are conducted on all suspected controlled substances received by the Crime Lab. The testing accomplished on each piece of evidence is determined by scientific principles and protocols used by Forensic Scientists and accredited laboratories throughout the country.

Drug case submissions increased 8% from 2009, as the lab continued to work cases in a confirmatory mode in preparation for court. The Indianapolis Metropolitan Police Department's preliminary testing program, which started in 2005, is still successfully spot testing commonly found drugs of abuse, resulting in fewer submissions to the Crime Lab's Drug Chemistry Section.

Two Kilos of Cocaine Submitted for Analysis

Drug Chemistry



	2008	2009	2010
Case Submissions	4533	4447	4801
Completed	4522	4428	4831
Backlog	50	62	33

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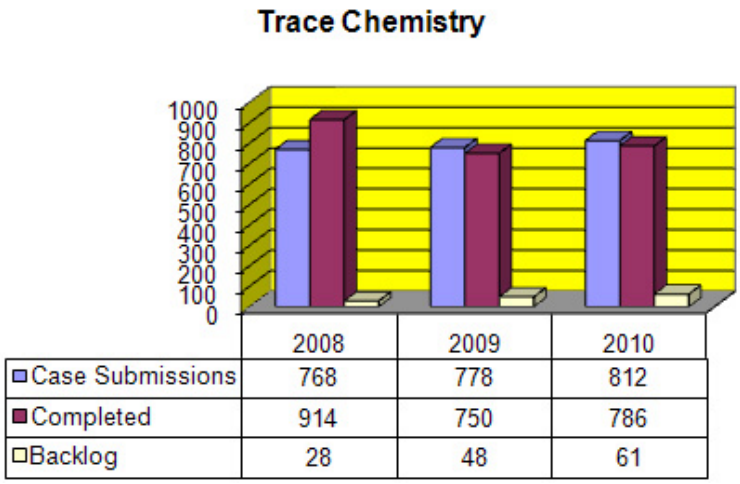
Chemistry Unit
Trace Chemistry Section

The Trace Chemistry Section is staffed with three (3) Trace Chemists. This section tests and/or compares hairs, fibers, fire debris, blood alcohol, physical matches, plastics, auto headlamps, and other evidentiary items. The addition of a third Trace Chemist allowed for a significant reduction in the backlog during the year.

The chart to the right depicts Trace Chemistry casework activity in recent years.



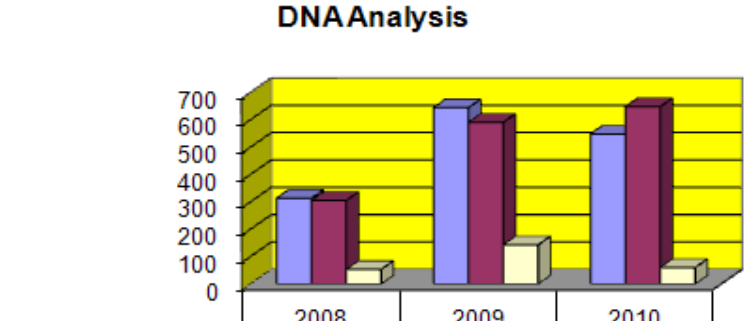
	2008	2009	2010
Case Submissions	768	778	812
Completed	914	750	786
Backlog	28	48	61

Biology Unit

The Biology Unit consists of two sections: DNA Analysis and Serology. It is staffed with five (5) DNA Analysts and five (5) Serologists; two (2) of which are supervisors in the unit - a DNA Section Supervisor/Technical Manager and a Serology Section Supervisor.

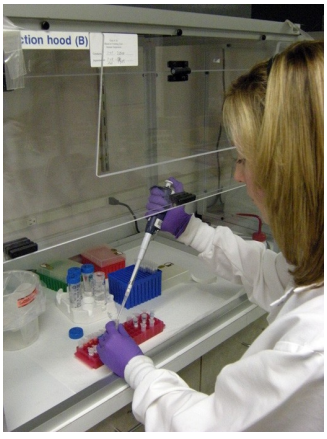
The DNA Section develops DNA profiles from evidentiary samples for comparison with the genetic profiles of suspects, or for submission into the Combined DNA Index System (CODIS). This database is particularly useful when there is a biological sample obtained from the crime scene and known suspects do not exist. CODIS allows unknown profiles to be searched against other profiles in the database, generally those of convicted felons and unknown profiles from other cases.

DNA Section casework resulted in seventy-seven (77) CODIS hits during 2010, including four (4) homicide cases, fifteen (15) rape cases, nineteen (19) robberies and twenty-nine (29) burglaries. These are cases which may have potentially remained unsolved, or taken significantly longer to solve, without the use of CODIS.



	2008	2009	2010
Case Submissions	313	644	548
Completed	305	591	648
Backlog	53	143	60

Note: new DNA case submission policy limited requests in 2010.



DNA Analyst Preparing Samples for Analysis

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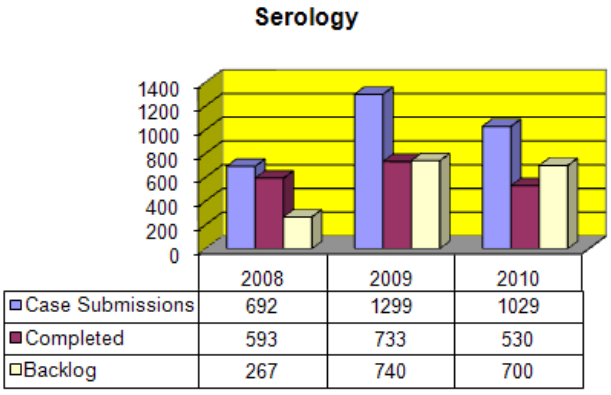
Biology Unit

All DNA cases begin with the examination of evidence by Forensic Scientists assigned to the Serology Section. They scan the evidence employing various visual, microscopic, and chemical techniques in a search for potential biological stains. Once found, the Serologists document, identify, and prepare samples of the biological stains for the DNA Section. Clothing, bedding, weapons and other evidentiary items are carefully documented and sampled during the Serologist's search for biological stains.

Forensic Serologist Entering Data in the Laboratory Information Management System



Crime Scene Unit

The Crime Scene Unit consists of two sections: the Crime Scene Section and the Forensic Evidence Technician Section.

The Crime Scene Section is staffed 24 hours a day, 365 days a year. Sixteen (16) Crime Scene Specialists, including a supervisor and two (2) technical leaders, are divided among three shifts to provide around-the-clock coverage for all law enforcement agencies in Marion County. This section responded to 753 crime scenes during 2010, the majority of which were serious crimes against a person. Specialists process crime scenes by conducting thorough searches, documentation, evidence collection, scene sketches, as well as photographing the evidence and scene using still and video cameras.

Crime Scene Specialist Taking Notes at the During Scene Processing

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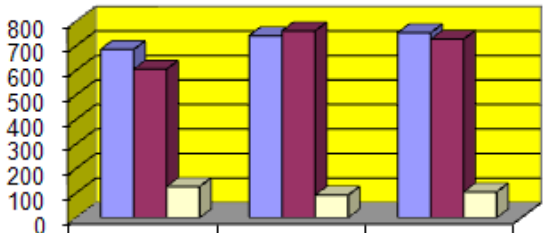
Crime Scene Unit

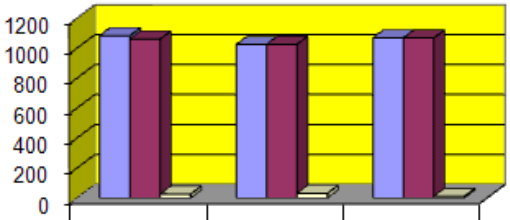
The Forensic Evidence Section attends autopsies to take photographs and collect physical evidence, including: clothing, rolled fingerprints, blood, hair, fibers, bullets, and other trace evidence. The four (4) Forensic Evidence Technicians, including a supervisor, of this section also collect and process sexual assault kits from Marion County hospitals to ensure the integrity of the physical evidence from the hospital to the Biology Unit. Forensic Evidence Technicians are also trained to handle video and photo applications within the laboratory, which includes responsibility for the I-MCFSA crime scene videotape library, camera and digital imaging equipment, etc. They are trained to use the lab's dTective Forensic Video Examination System for applications involving surveillance and other types of video.

Crime Scene Section



	2008	2009	2010
Case Submissions	685	741	753
Completed	605	761	727
Backlog	127	92	105

Forensic Evidence Technician Section



	2008	2009	2010
Case Submissions	1084	1025	1070
Completed	1062	1027	1069
Backlog	27	32	11

Forensic Evidence Technician Processing Video Images from a Robbery

The chart to the left depicts Forensic Evidence Technician casework in recent years. This includes the processing of 508 sexual assault kits and collecting evidence at 196 autopsies during 2010.

Administrative Unit

Administrative staffing consists of nine and six-tenths (9.6) positions (the 0.6 representing a part time position), including: a Director, Deputy Director, Quality Assurance Manager, Operations Manager, Forensic Administrator, three and six -tenths (3.6) Forensic Evidence Specialists, and a custodian. Areas of responsibility include the quality assurance program, budget management, purchasing, information technology, security, human resources, grant management, evidence handling and administrative functions.

Staffing

Staffing levels were held at 2009 levels during 2010, ending with five (5) vacant positions.

Indianapolis-Marion County Forensic Services Agency 2010 Annual Report

Administrative Unit

The I-MCFSA maintained its American Society of Crime Laboratory Directors/Laboratory Accreditation Board – *International* Accreditation during 2010, successfully completing the surveillance visit and internal assessment. The purpose of this accreditation includes: to improve the quality of laboratory services; to maintain standards by which the laboratory can assess its performance and strengthen the operation; to provide an independent, impartial, and objective system for a total operational review; and to offer to the general public and to users of laboratory services a means of identifying those laboratories which have demonstrated compliance with established standards.

Grant Management

A component of the continued success of this agency is the receipt of State and Federal Grant monies. This agency continually pursues grant opportunities and has been fortunate in receiving federal and local awards, with 2010 being no different. The I-MCFSA was successful in receiving grant awards totaling over $530,000 for the purchase of equipment for several sections of the laboratory, to provide training and development for the Forensic Scientists, to purchase supplies, and to assist in the analysis of DNA cases.

Financial Information

Annual Budget	2008	2009	2010
Annual Budget	$7,001,093	$7,483,245	$7,555,355
Expenses			
Personal Services	$4,527,945	$4,650,502	$4,961,408
Materials and Supplies	$ 264,181	$ 386,644	$ 566,943
Services and Charges	$ 742,848	$ 776,366	$1,028,802
Properties and Equipment	$ 330,707	$ 707,737	$ 988,202
Funding Sources			
County General Fund	$6,320,932	$5,144,681	$4,868,504
State and Federal Grants	$ 960,555	$1,113,221	$1,833,066
Public Safety Income Tax		$ 889,698	$ 853,785

Notes:
1. Starting in 2008, annual budget figure includes grant monies
2. Starting in 2008, expenses include grant monies
3. $289,093 was returned to the County General Fund in 2010
4. Tracking revenue and expenses directly to the Public Safety Income Tax Fund was initiated in 2009.

Indianapolis-Marion County Forensic Services Agency 2010 Annual Report

Administrative Unit

Procurement

Approximately 600 individual purchases were made in 2010. Additionally, preparations were made in anticipation of new purchasing software.

Budget

Budget adjustments continued to be made during the year. Reduction in spending was accomplished by not filling vacant positions and continued efforts to streamline processes where possible.

Appropriated state and federal grant monies of $1.8 million, of which $912,893 was spent, provided much needed funding to allow the purchase of additional analytical equipment, overtime funding and the ability to continue to provide professional development for the laboratory staff.

The I-MCFSA Main Laboratory is housed with the Marion County Sheriff's Department at 40 S. Alabama St.

Fleet

In April, the lab received delivery of a nineteen foot major disaster/crime scene response vehicle. This vehicle will be used to provide added support for extensive crime scenes and disasters. Funding was provided through a U.S. Department of Homeland Security grant awarded to the IMCFSA and Hamilton County Sheriff's Department.

LIMS – Laboratory Information Management System

Expansion of our LIMS continued through 2010 by adding to the availability of customer reports and data on a 24/7 basis. Testing is now underway to allow submission of certain documents electronically which will save time for our law enforcement customers who will no longer have to travel here during certain business hours. Testing of the enhanced online system will take place in January 2011.

Training and Tours

Over 3,800 people, including Marion County Judges, police officers and college students, received training and/or tours from Crime Lab personnel during 2010.